UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,995	02/27/2004	Krzysztof Matyjaszewski	00093CON	1410

26285 7590 11/23/2004

KIRKPATRICK & LOCKHART LLP
535 SMITHFIELD STREET
PITTSBURGH, PA 15222

EXAMINER	
CHEUNG, WILLIAM K	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/788,995	MATYJASZEWSKI ET AL.
	Examiner	Art Unit
	William K Cheung	1713

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *286-319* is/are pending in the application.

4a) Of the above claim(s) *286-305 and 314-317* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *306-313, 318-319* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 286-319 are pending. Claims 286-305, and 314-317 are drawn to non-elected claims. Claims 306-313, 318-319 are examined with merit.

2. In view of argument and amendment filed November 9, 2004, the rejection of claims 312-313 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 306 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Keoshkerian et al. (US 5,891,971) for the reasons adequately set forth from paragraph 7 of non-final office action issued August 11, 2004.

Keoshkerian et al. (col. 15-16) in examples I and II disclose a block copolymer using the macromer of example I which is prepared using TEMPO as a living radical initiator. Because the block copolymer of example II involves using the macromer of example I (col. 15-16) which has a conversion of 65 percent, the examiner has a reasonable basis that the claimed copolymers are inherently possessed in Keosherian

et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Regarding the claimed "adding and polymerizing a second **free radically** (co)polymerizable monomer is conducted after 75% of the first monomer is polymerized", applicants must recognize that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Applicant's arguments filed November 9, 2004 have been fully considered but they are not persuasive. Applicants argue that block copolymers of Keoshkerian et al. have narrow molecular weight distribution. However, applicants must recognize that the teachings of Keoshkerian et al. also include broad molecular weight distribution teachings, and also a process which include the incomplete conversion of the first monomer of the disclosed block copolymerization process. In view of the substantially identical polymerization process disclosed in Keoshkerian et al. and the process being claimed, the examiner has a reasonable basis to believe that the 102-3 rejection set

forth is proper. Applicants please recognize that the instant claims are also product by process claims that applicants do not have any evidence to show the claimed block copolymer structure had been obtained.

6. Claims 307 are rejected under 35 U.S.C. 102(b) as anticipated by Keoshkerian et al. (US 5,891,971) for the reasons adequately set forth from paragraph 8 of non-final office action issued August 11, 2004.

Keoshkerian et al. (col. 15-16) in examples I and II disclose a block copolymer using the macromer of example I which is prepared using TEMPO as a living radical initiator. Because the block copolymer of example II involves using the macromer of example I (col. 15-16) which has a conversion of 65 percent, the examiner has a reasonable basis that the claimed copolymers are inherently possessed in Keosherian et al. Claim 307 is anticipated.

Applicant's arguments filed November 9, 2004 have been fully considered but they are not persuasive. Applicants argue that block copolymers of Keoshkerian et al. have narrow molecular weight distribution. However, applicants must recognize that the teachings of Keoshkerian et al. also include broad molecular weight distribution teachings, and also a process which include the incomplete conversion of the first monomer of the disclosed block copolymerization process. In view of the substantially

identical polymerization process disclosed in Keoshkerian et al. and the process being claimed, the examiner has a reasonable basis to believe that the 102 rejection set forth is proper. Applicants please recognize that the instant claims are also product by process claims that applicants do not have any evidence to show the claimed block copolymer structure had been obtained.

7. Claims 308-313 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Keoshkerian et al. (US 5,891,971) for the reasons adequately set forth from paragraph 9 of non-final office action issued August 11, 2004.

Keoshkerian et al. (col. 15-16) in examples I and II disclose a block copolymer prepared by using TEMPO as living radical initiator. Because the block copolymer of example II involves using the macromer of example I (col. 15-16) which has a conversion of 65 percent, the examiner has a reasonable basis that the residual first monomer would facilitate the formation of a tapered block portion in the disclosed copolymers of example II. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Applicant's arguments filed November 9, 2004 have been fully considered but they are not persuasive. Applicants argue that block copolymers of Keoshkerian et al.

have narrow molecular weight distribution. However, applicants must recognize that the teachings of Keoshkerian et al. also include broad molecular weight distribution teachings, and also a process which include the incomplete conversion of the first monomer of the disclosed block copolymerization process. In view of the substantially identical polymerization process disclosed in Keoshkerian et al. and the process being claimed, the examiner has a reasonable basis to believe that the 102-3 rejection set forth is proper. Applicants please recognize that the instant claims are also product by process claims that applicants do not have any evidence to show the claimed block copolymer structure had been obtained.

Further, according to applicants' argument filed November 9, 2004, applicants seem to equate narrow polydispersity as a measurement for the tendency of a monomer of forming a block copolymer in a copolymerization process. However, that is simply not true. The tendency of a monomer to form a block, random copolymer depends on the reactivity ratios of the comonomers mixture, the solvent medium, and the polymerization temperature, just to name a few, not the polydispersity of the copolymers.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William K. Cheung

Primary Examiner

November 19, 2004

WILLIAM K. CHEUNG
PRIMARY EXAMINER